

Abstract

White-emitting LED with defined color temperature

LED with a low color temperature up to 3500 K, comprising a blue-emitting LED with two phosphors in front of it, a first phosphor from the class of the oxynitridosilicates, having a cation M, which is doped with divalent Europium, and has the empirical formula $M_{(1-c)}Si_2O_2N_2:D_e$, with $M = Sr$, or $M = Sr_{(1-x-y)}Ba_yCa_x$ with $x+y < 0.5$ being used, the oxynitridosilicate completely or predominantly comprising the high-temperature-stable modification HT, and a second phosphor from the class of the nitridosilicates of formula $(Ca,Sr)_2Si_5N_8:Eu$.

Fig. 1